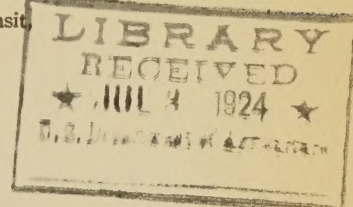


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THE EXTENSION PATHOLOGIST

"To promote economic crop production, improve the quality of the products, and prevent wastage in storage, transit, and at the market."



Issued by

THE OFFICE OF COOPERATIVE EXTENSION WORK

AND

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UNITED STATES DEPARTMENT OF AGRICULTURE

VOLUME 2.

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THE EXTENSION PATHOLOGIST

Volume 2.

Number 6.

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THE EXTENSION OF EMERGENCY

Number 2

Volume 2

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METHODS OF DISSEMINATING INFORMATION.

By C. T. Gregory, Extension Plant Pathologist,
Purdue University, Indiana.

One of the functions of extension work is the giving of information. It may afford us much personal satisfaction to help some one farmer solve his problems, and it may win us a staunch friend. The matter should not end here, however, Successful work on an individual farm should be followed by efforts directed towards putting the information into the hands of all farmers who have similar problems. Where we reach scores of people by personal contact, we shall reach hundreds or thousands by stories in newspapers and farm magazines.

With the help of the extension pathologists in other States, and from his own experience, the writer has attempted to outline the various means of publicity available. These are worthy of study, for too often they are not sufficiently developed. Certainly we should not neglect any medium of advertising our work to both the farmer and the city man.

Agencies for Disseminating Information.

1. The press.

Newspapers.
Magazines.
Handbills.
Monthly notes.
Stickers.
Posters.
Cartoons.
Bulletins.
Pamphlets.

2. Exhibits.

At county and State fairs.
In store windows.
Through county agents and
vocational teachers.
Railroad trains.

3. Visual instruction.

Motion pictures from United States.
U. S. Department of Agriculture.
Stereopticon slides.

4. Radio.

5. Personal contact.

Lectures.
Demonstrations.
Through merchants, bankers,
club meetings, and the like.
Farm visits.

The Press.

Newspapers furnish an exceedingly valuable means for giving the work publicity. As in Indiana, many experiment stations provide an information service which handles the various stories from the station. However, the extension pathologist never should wait for the agent in charge of this work to dig out the news stories. A successful demonstration is full of news valuable not only locally but everywhere in the State. The publication of interesting news associated with a successful demonstration will do much to put the project across.

A State farm paper such as the Indiana Farmer's Guide, which reaches over half the farmers of the State, is an immensely valuable asset. It will pay any extension pathologist to furnish articles regularly to such papers. The stories should be written in a popular style, care being taken, however, not to sacrifice accuracy. The names and experiences of farmers may often be used. This will add interest to the story, and also will give it weight with farmer readers. Reprints of the articles are valuable for use in connection with correspondence. They may be supplied also to county agents and vocational teachers.

In Indiana it has been found worth while to furnish the county agent with newspaper articles on demonstrations or lectures in his county. It is good practice to furnish a short article to be used before the meeting, and one, giving an outline of the lecture or of the demonstration, for publication after the meeting.

Posters, stickers, and handbills serve a good purpose, but they should be brief in their statement and strikingly illustrated. Cartoons can be used effectively for this purpose. E. A. Stokdyk's poster on "Smite the Smut" illustrates this idea very well (see p. 48). In Minnesota, good use has been made of photographs to illustrate posters (see p. 49). Too much reading matter should not be crowded into material of this sort. The poster should attract the passer-by, giving him the essential idea at a glance. Usually, folks will not linger long to read it, and probably can not remember many directions. The Minnesota potato-tour poster is a good example of simplicity.

Cartoons and illustrations of methods of treatment are good, if the pictures carry the story (p. 50, fig. 2). "I can't draw" is usually one of the objections to the making of posters. Frequently, however, when a person can draw, there is a temptation to add many detracting features. The idea in the picture is what counts.

Bulletins and pamphlets should be short, in order to be of value in extension work. Details of experiments, of course, have no place in publications of this sort. Two leaflets, which seem to me to carry the message clearly and briefly, are the United States Department of Agriculture circular on the control of sweet-potato diseases, and a circular from Kansas, Directions for Potato-Seed Treatment. The latter gives the method, and answers clearly a question which is very commonly asked: "Can I treat sprouted potatoes?"

A short mimeographed statement concerning a project may advantageously be inclosed with every letter written during a certain period of time. For example, in January and February, A. A. Hansen inclosed with each letter a small slip giving the "Do's and Don'ts" concerning the kind of seed to reject or buy, and also concise information on the seed law. A rubber stamp, worded "Weeds mean loss. Kill 'em!" is effective if it is not used too long. A. J. Ogaard in Montana uses a more elaborate scheme. He has four pages for his letters, using the last three for some pertinent message to the farmers. The message is short and is printed in large type.

It is my belief that the project which least disturbs the normal routine of the farm is the one that goes over best. For example, the use of certified potatoes for seed is responsible for an immense increase in the potato acreage of Indiana. The use of yellows-resistant cabbage seed is becoming more and more common. This project puts us in contact with the city people as well as with the farmer. The poison-plant project has brought about great interest in the weed work, an interest which was first created by newspaper stories and "Farmer's Guide" articles.

Exhibits.

Exhibits should be simple. If possible, illustrate only one idea or one disease (p. 50, fig. 1). The exhibit should attract the attention, and bring out questions concerning other troubles (p. 50, fig. 3). At the State fair, the writer makes a practice of taking the names and addresses of all those who inquire about plant diseases. He has also a complete supply of literature ready for distribution.

Opportunities for using store windows should never be neglected. In Indiana, use has been made of store windows to exhibit the results of potato demonstrations, usually putting them in clothing-store windows for the sake of contrast. Suggestions have been sent to county agents for hardware-store and drug-store window displays on the cat-smut treatment. In addition, samples of advertisements and newspaper stories, which can be used in connection with the work, are always supplied.

Poison weeds in the county agent's office, a store window, or a bank, will always attract much attention. The same exhibit in a feed store or a grocery store might not be so effective. A. A. Hansen also sends to vocational teachers or county agents a small weed exhibit composed of drawings of the weeds and their seeds. The writer has used a large exhibit with flashing lights, which was sent to a few interested county agents.

Personal Contact.

If possible, put the demonstrations in conspicuous places - a roadside, a picnic ground, or near a church. A large placard stating that a demonstration is being held is a valuable feature.

E. L. Nixon of Pennsylvania says that he gets his best publicity on the potato project by holding farmers' and business men's potato banquets. The news of these banquets carries with it information as to the success of the potato demonstrations.

We have found that leading farmers in a song or two helps to arouse them from a sort of mental lethargy often found at certain types of meetings. This aids in creating a more favorable atmosphere, and puts the farmers in a better mood to listen to our talk.

E. C. Sherwood of West Virginia has been very successful in the use of illustrated lectures, using charts that explain the causes of plant diseases and the relation of control measures to the cause of the disease. The writer, using lantern slides, has made similar use of such lectures for work on control of vegetable and cereal diseases. Farmers are interested in pictures which show clearly the nature of microscopic life. Many of my lantern slides are from photomicrographs, but, if avoidable, I do not use sections of leaves or stems; they are too hard to understand, unless presented in diagrammatic form.

NOTE: The above article deals with matters related to methods of conducting extension work in plant pathology. In such papers, which will appear from time to time, important points brought out in the outline published in the February number will be enlarged upon. It will be found helpful to keep that outline for reference. F.C.M.

SMITE THE SMUT



SMUT, THE GRAIN ROBBFR—I take the profits and more, too, if not prevented.
FARMER—You don't take any from me; I know how to stop you.

WHEAT

KAFIR

OATS

BARLEY

Smuts can be prevented.

HOW?

Treat seed with formaldehyde solution.

WHEN?

Just before sowing.

WHY?

To reduce loss from smut and to improve quality of grain.

COST?

Only a few cents an acre.

For further information ask your county agent or write the

**EXTENSION SERVICE
KANSAS STATE AGRICULTURAL COLLEGE**

MANHATTAN, KANSAS

Cooperative extension work in agriculture and home economics, Kansas State Agricultural College and U. S. Department of Agriculture. Acts of May 9 and June 30, 1914. H. UMBERGER, Director

Prepared by E. A. Stoddy,
Extension Plant Pathologist

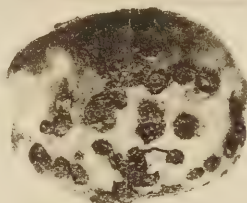
DISINFECT SEED POTATOES

- - AND - - CONTROL THESE DISEASES



RHIZOCTONIA
PLANT AND TUBER

Rhizoctonia reduces yield by causing dry stem rot



SCAB

Scab reduces quality and market value of tubers

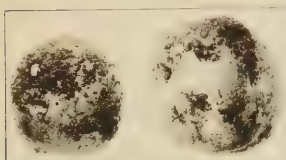


BLACKLEG
PLANT AND TUBER

Blackleg causes poor stand and rot in tubers

W H Y ?

Better Quality Better Yield
More Marketable Tubers



H O W ?

Use Corrosive Sublimate
6 ounces will treat about 25 bushels
of potatoes



The barrel method is recommended for growers having from two to twenty acres. For larger acreage it would be better to use a large wooden tank that could hold a large quantity of potatoes at each soaking. With one 52-gallon barrel, a person can treat from 25 to 30 bushels a day, while if 4 or 5 barrels are used, one man can treat from 100 to 150 bushels per day. A 52-gallon barrel will hold about 4½ bushels of potatoes, and a 30-gallon barrel will hold about 3½ bushels.

MATERIALS NEEDED

1. Corrosive sublimate (one ounce for every four bushels of potatoes to be treated.)
2. One or more barrels (52 gallon size preferred) with hole bored near bottom of each and fitted with pine plug.
3. A platform about 3 feet high, on which to stand the barrels.
4. A half barrel or tub of 30 gallon size or more, and marked on the inside to show level of 30 gallons of liquid. This will be a great help in making and strengthening solutions.
5. A wooden pail for transferring solutions from tub to barrels.

Put 4 ounces of corrosive sublimate in the bottom of the tub and pour over it one or two gallons of hot water. Stir this thoroughly until all the sublimate is dissolved, then add enough cold water to make 30 gallons.

Fill barrels with screened potatoes and add enough solution to cover them. A 52-gallon barrel will require about 23 gallons of solution. After the potatoes have soaked for 1½ hours, the solution is drained back into the tub by removing the barrel plug. Then spread the potatoes out to dry or dump them into a wagon box. The same solution can be used to treat about 30 lots of potatoes, after which it should be discarded and a new solution made up. However, the solution loses some of its strength with each successive use, so that it is necessary to add one ounce of corrosive sublimate to the solution after the second lot has been treated, and add another ounce after treating the fourth lot of potatoes. When adding corrosive sublimate to weakened solution, first dissolve it in about a gallon of hot water and then add it to the

old solution. Throw away the solution after six lots have been treated and make up a new one.

THINGS TO REMEMBER

1. Corrosive sublimate is a deadly poison when taken internally, but it does not injure the skin. Keep the solution and treated tubers away from stock and children.
2. When through with the containers, wash them thoroughly. Use only wooden containers for corrosive sublimate.
3. Treat tubers before they sprout or they may be injured by the solution.
4. Treat potatoes before cutting, except when blackleg is serious. When cut potatoes are treated, they should be planted immediately or spread out to dry. If left in piles or sacks, they will heat and poor germination will result.
5. Always dissolve corrosive sublimate in HOT water.
6. Do not treat in gunny-sacks, as they absorb too much of the poison.
7. Allow the tubers to dry quickly after treatment, if they are treated some time before planting. This will prevent heating.
8. Prevent contamination after treatment by using only clean bins, sack and other containers.
9. Plant treated tubers on land that has not grown potatoes for four or five years.
10. Do not apply fresh manure, lime, or wood ashes to potato ground. Plow under a crop, such as clover or rye, helps to prevent scab.
11. Call on the county agricultural agent for a demonstration in your neighborhood. The county extension office is always at your service.

The hot formaldehyde treatment is just as effective as the corrosive sublimate treatment but requires more equipment and attention. It is especially adapted to large acreages where time is an important factor.

For further information, call on your County Agent, or write to the Plant Disease Department, University Farm, St. Paul, Minnesota.

CABBAGE YELLOWS

THE WORST VEGETABLE DISEASE IN INDIANA

IT WILL STAY IN THE GROUND PERMANENTLY

NO SOIL TREATMENT OR FERTILIZER WILL DO ANY GOOD

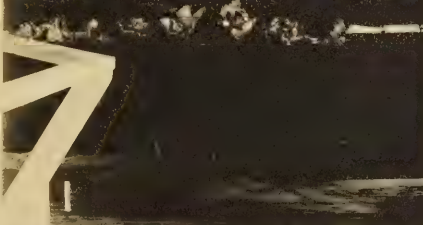
CONTROL

USE YELLOW RESISTANT VARIETIES

THE Yellow Disease is The Principle Reason WHY CABBAGE FAILS

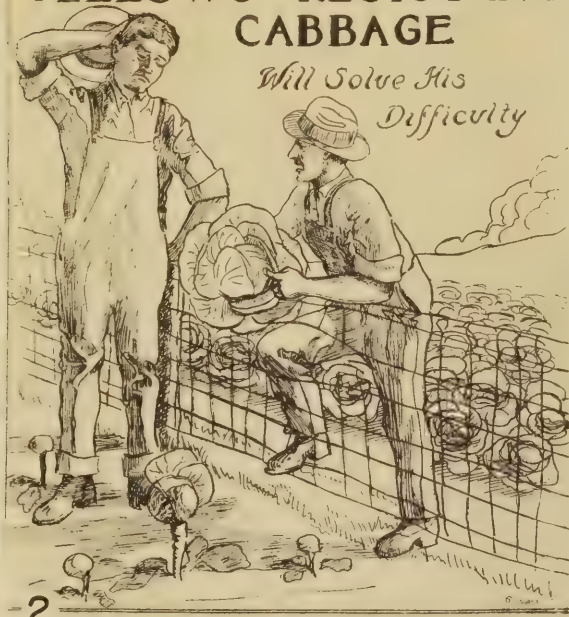
Symptoms: Yellow Leaves, Withering of leaves, Plants die young, Failure to produce heads, Wasting of leaves

RESISTANT VARIETIES: ALL-SEASON, 15 TONING, WILKINSON, SUCCESSION, WILKINSON, HOLLANDER



YELLOWS RESISTANT CABBAGE

Will Solve His Difficulty



2

Mr. Success Tells His Neighbor Why His Cabbage Has Failed.

HOT WATER TREATMENT.

KILLS **REDUCES**

Losses, smut wheat

Stinking smut wheat

SEED PLOT
2,083 ACRES SOWN WITH HOT WATER TREATED SEED IN A SEPARATE FIELD WILL GIVE HIGH GRADE SEED FREE FROM WEEDS, SMUT AND OTHER DISEASES.

Ask Your County Agent about Hot Water Treatment

SHELBY COUNTY TREATING TANK
THIS TANK TREATED OVER 900 BUSHELS OF WHEAT IN SHELBY COUNTY IN THE FALL OF 1919

COCKLE

WILD ONION

WEED PLANTS

FIVE MILLION DOLLARS
WORTH OF WHEAT CAN BE SAVED BY GETTING RID OF SMUT, COCKLE, RYE, WILD ONION AND GARLIC.


Hot Water Treated Seed must easily certified

Hot Water Treated Seed must easily certified

Untreated Yield 8 bushels per acre Grade No. 1 wheat

Hot Water Treated Seed must easily certified

Untreated Yield 8 bushels per acre Grade No. 1 wheat



3

ASSISTANCE FROM NEWSPAPERS.

Speaking of the assistance that may be had from newspapers reminds me of a method used in South Carolina. W. D. Moore and other specialists working in that State make interesting use of "The Weekly News Notes," a printed sheet which is supplied to newspapers of the State. Copies of this which have come to this office recently contain a column headed "Questions and Answers from Specialists' Correspondence with Farmers." This column gives an opportunity to increase the number of farmers reached in connection with matters which are likely to be of very real interest to many farmers other than the one who went to the trouble of writing the original letter requesting information.

Doctor Moore's use of the "Weekly News Notes" is not limited to the question-and-answer column. He seldom fails to provide an interesting news story for reprinting throughout the State. F.C.M.

STOVER LEADS NEW PROJECT IN OHIO.

Under a project agreement which became effective April 1, Ohio resumed active extension work in plant pathology. Wilmer Garfield Stover has been selected to organize the work in that State, opportunity being taken of six months' time available from his teaching activities. His experience with extension work during the period 1918-1920, his knowledge of cereal diseases, and the qualifications he has shown as instructor in Ohio State University, make Mr. Stover particularly well fitted to lead this work in Ohio. We are glad indeed to be able to add his name to the list of extension pathologists.

Although plans of county agents were in many instances already mapped out by April 1, Mr. Stover has nevertheless succeeded in working out a most comprehensive plan of work for the season. Some indication of the scope of this plan is given under "News from the States." We all wish him success.

PROGRESS MADE IN CONTROL OF SWEET-POTATO BLACK-ROT.

By L. L. Harter, Pathologist, Bureau of Plant Industry,
United States Department of Agriculture.

During the month of May a rather extensive trip was made through some of the Southern States, which had for its object, first, to determine to what extent the methods recommended for the control of sweet-potato diseases are being applied, and second, with what success.

A number of plant beds were examined in localities in Alabama, Georgia, and Mississippi where inspections were made five or six years ago. Practically no black-rot was found in any of the beds examined, which was in great contrast to what was observed five or six years ago, when diseased plants could be pulled up from almost any place in the bed. These results show what can be accomplished by impressing upon the farmers the necessity for careful selection, seed treatment, and the sanitary preparation of the hotbed. It is also of interest to note that most of the farmers are familiar with the control measures recommended and apply them with great care.

When this work was started by the United States Department of Agriculture, about 12 years ago, black-rot was a serious menace to the sweet-potato industry. Since that time, in some of the worst infested territories, the disease has been almost entirely eliminated. It is also gratifying to learn that the farmers claim to have far less loss from this disease in the storage house. The strict quarantine regulations which have been in force in some of the Southern States during the past few years, and which require the inspection and certification of plants before sales can be made or shipments sent into other States, have contributed materially to the success of the campaign for the control of sweet-potato diseases. From these results it would seem that similar restrictions should be introduced and enforced in all the sweet-potato growing States, and so far as possible it might be advisable to require uniform certification in all States, thereby simplifying interstate shipment. There is an urgent necessity for the introduction and application of such quarantine regulations in some of the Northern States.

NEWS FROM THE STATES.

Iowa: Canada Thistle.

While plant-pathological problems take the major portion of my time, I find that the project on the eradication of Canada thistle and other weeds is a very popular and interesting one. During the present season this project is being carried on in nearly 40 counties.

An outstanding series of thistle-eradication demonstrations was held in Sioux County, in the extreme northwestern part of the State, late in May. An interesting feature there was the fact that the county attorney who had held office for several terms, was being pushed hard for renomination by a young lawyer. Hence, last winter he hit upon the idea of emphasizing the law pertaining to Canada-thistle eradication, and was largely instrumental in calling a meeting of the county supervisors, the township trustees, and the officials of the Sioux County farm bureau. The meeting was held in March. At the meeting the county attorney explained the weed law and its enforcement, and a lively discussion of the best methods of eradication followed. The resolutions that were unanimously adopted gave the township trustees authority to go the limit in enforcing the weed law.

This stimulus, added to the increasing fear of Canada thistle, served to attract over 200 farmers to the demonstrations. Four major townships were selected for the work. The presence of the extension plant pathologist at these meetings was not known until after the farmers had held a lively discussion of the methods of eradication which they believed to be most successful. The first hour was spent in this way. Following this, several furrows were plowed through the center of the patch, and a good many of the roots were forked out. I took only a minor part in the discussion, until the county agent called upon me to give my experience in handling Canada thistle. Then I took up the nature and prevalence of the worst weeds in the State, and a summary of the weed and pure-seed law, finishing with a discussion of the methods of eradication which leading Iowa farmers have found successful.

From the enthusiasm shown at these meetings it appears that the enforcement of the weed law in Sioux county will not be necessary, since the farmers are organized by townships to fight Canada thistle to a finish. This is a good example of the right kind of cooperation among farmers, farm-bureau officials, and county officers, and what this cooperation will accomplish if properly directed.

It is interesting to note that an ever-increasing number of farmers are now firm believers in the summer-fallow method as the only sure method of eradication. Two years ago a group of 50 farmers would have had several distinct methods; now they are fairly well agreed that summer-fallowing is the surest method.

In Sioux and some of the adjoining counties, summer-fallowing followed with alfalfa is said to be effective. Several experiments are now being run to determine this point. If alfalfa following summer-fallowing will do the job, we are strongly in favor of recommending it. It has been used successfully in Indiana, and ought to be satisfactory in Iowa.

We hope that alfalfa will prove satisfactory for two main reasons:

1. It will be an economic and practical method of eradication.
2. It will encourage more farmers to grow alfalfa, and will aid the farm-crops extension department in their drive for larger acreages of alfalfa.

DONALD R. PORTER.

Maryland: Tobacco Wildfire - Apple Diseases.

Tobacco wildfire is present in a large proportion of the tobacco beds throughout the State. In some of the most important tobacco-growing sections at least half of the beds are affected. The disease is causing the destruction of many plants in some of the beds. In all beds which have been thoroughly sprayed with Bordeaux mixture the disease has been checked.

Leaf-spot of apple is very prevalent in almost all the orchards of the State. It is especially prevalent in orchards where the pink bud spray has been omitted. Reports of the presence of apple scab are being received from different parts of the State, and it is especially destructive in orchards which have not been properly sprayed.

R. A. JEHLE.

Minnesota: Treatment of Seed Potatoes - Exhibit Trains.

We are just finishing a rather strenuous season of treating seed potatoes. We have started about 40 seed-potato treating centers. We have not yet received all the figures on the quantity of seed treated or the number of farmers using the treatment, but expect to get these in the next week or two. The seed-treating center is becoming very popular in many of our counties, as it enables the farmers to get the work done in a short time and at an average charge of 4 cents per bushel.

The university plans to run a land-clearing train through some of the northern cut-over counties early in June. The train will carry exhibits along various agricultural lines that will interest the farmers of the region. Space in one of the exhibit cars has been allotted to us for an exhibit of plant diseases, which we are now preparing. We expect to feature the seed-treating center and potato diseases.

R. C. ROSE.

New York: Spray Information Service.

The spray information service is being conducted this year, in one manner or another, in 29 counties of the State. This means that spray information is being given regularly during the spraying season to all farmers of these counties who desire it. Fifteen counties have the service of special field assistants. There are 13 of these assistants, 2 of them serving in two counties each. One of these 13 assistants is appointed by the State department of farms and markets and the remainder by the college of agriculture. Three of the latter are county agents who are devoting the greater part of their time during the spraying season to this work. In 10 counties, where fruit growing is not of major importance, the county agent is sending spray information to those growers who desire it, and in three counties the growers are receiving a mail service from a field assistant located in an adjoining county.

Supervision of the service by leaders from the departments concerned at the State college is being given the field assistants and county agents who are conducting it. This consists of visits to the men in the field, of correspondence, and of timely articles in the weekly news-letter being sent to each of them. The Weather Bureau is cooperating by sending a special forecast each night to the counties conducting the service. Upon these forecasts and upon information obtained from their leaders and by observing the development of the trees, insects, and pathogenes, the field assistants decide upon the applications to be made. Their recommendations are sent to the growers in circular letters and cards, and at critical times are relayed to them over the telephone if that is possible. Many farm visits are being made by the field assistants. The value of their recommendation is being checked in demonstration orchards to which all applications are being made as directed by the field assistant.

A conference of special field assistants and county agents conducting the spray information service in western New York took place at Geneva, N. Y., May 31. Professors P. J. Parrott and F. C. Stewart of the New York State Experiment Station and the supervisors from the college at Ithaca were present. A round-table discussion occupied most of the day,

during which questions of the field men were taken up. Recommendations for summer applications were also discussed. Later in the afternoon the meeting adjourned to the experiment-station orchards, where some of the experimental work of the station was observed.

The weather throughout the preblossom period in the development of the apple was extremely favorable for scab infection and unfavorable for making an application of a fungicide. It was reported that scab is beginning to appear abundantly as a result of infections occurring at that time.

E. F. GUBA.

Ohio: Program of Work.

We have a project on spraying for apple scab, another on apple blotch, another on raspberry anthracnose, one on cherry leaf-spot, and a minor one on black-rot of grape. We have also begun a project on spraying tomatoes. Potato spraying is now largely in the hands of the specialists in vegetable gardening and entomology, but I expect to cooperate with them in this work. During the latter part of June and early July, a partial survey of the wheat fields in the western part of the State will be made, in order to determine the prevalence of stinking smut, and the effect of the copper-carbonate dust treatment in the few places where it has been tried. This will be followed in the fall by a rather intensive campaign on seed treatment, with the specialists in farm crops cooperating. During the last few years the production of certified seed potatoes has been slowly developing, and we expect to give considerable time to field work in the furtherance of this project.

Above are the principal projects so far outlined, but attention has been given to a number of other matters such as tobacco diseases, tomato mosaic, and the diseases of greenhouse crops in the Cincinnati area. One of the things I should like above all others to do is to determine with the county agents in the several counties where special crops are grown, what their principal plant-disease problems are, and then organize efforts toward their solution, to be put into effect next year.

Projects on spraying apples for scab are being conducted on a rather large scale by the horticulture department. In the northeastern part of the State a number of county agents have potato spray rings, and apple orchards are sometimes sprayed with the same machinery. These have been in successful operation for several years. Apple-blotch spraying has been successfully demonstrated for about five years, and most of the county agents in regions where blotch is prevalent believe that the matter is now pretty well in hand.

W. G. STOVER.

South Carolina: Truck Crops - Pecans.

Due to a late spring, work started slowly in South Carolina this year; however, the crops have recovered from the effects of cold weather and are growing rapidly. Diseases of general crops have been common but not severe in any section. Sugar peas suffered heavily from a bacterial disease (*Bacterium pisi*) which is new to this State. No work could be done on this trouble this year.

Potatoes: Potatoes were generally infected with early-blight, and in some cases, late-blight caused a slight loss. Spraying and dusting were pushed this season more than ever before and resulted in the saving of many fields. The comparative results of this season show that Bordeaux sprays work most efficiently in controlling the common potato diseases.

Cucumbers: The cucumber crop has suffered slight losses in some sections from downy mildew, although the major part of the crop has been excellent and comparatively free from disease. This was brought about by a vigorous campaign for spraying, which resulted in practically all farmers using preventive measures. The Bordeaux sprays have given excellent control in all cases, and the farmers are well pleased with the results.

Watermelons: Anthracnose is appearing on unsprayed fields at this time. Some few men have refused to treat their fields and will hardly be able to make a crop. Spraying is being practiced generally, many men having equipped themselves with power machines for this work. Bordeaux mixture has proved very successful in controlling anthracnose in previous seasons and has given good results so far this season.

Pecans: Pecan scab has made its appearance earlier than usual this season and promises to cause serious trouble where proper spraying is not done. The sprayed groves, where Bordeaux is being used, are now in excellent condition.

W. D. MOORE.

Wisconsin: Potassium-Iodide Test Proves Its Value.

The potassium-iodide test for finding the approximate strength of corrosive-sublimate solution used in treating seed potatoes is proving its value in our potato-seed treatment demonstrations this season. In one case a solution had been used for 18 successive lots of potatoes. Before each treatment 1/2 ounce of corrosive sublimate was added for each 4 bushels treated. The potassium test before the last treatment showed the solution of correct strength. The solution tested by the Agricultural Chemistry Department at the end of the 18th treatment showed 1:1280. In another case a druggist had weighed out an 8-ounce lot of corrosive sublimate instead of a 4-ounce lot, making the barrel of solution double strength. The potassium-iodide test detected the error, and no damage was done.

Pennsylvania: Orchard Spray Service - Potato and Raspberry Disease Control.

This spring most of the time of the extension plant pathologists in Pennsylvania has been spent in conducting orchard-spraying demonstrations in 32 counties, sending out spray-service news based on leaf development and weather conditions to more than 1,000 growers and in locating and distributing 357 cars of disease-free potato seed.

The apple-orchard spraying demonstrations in the 32 counties include 31 commercial and 22 home orchards. The object of this work is, not only to tell when, how, and with what to spray, but also to have an extension plant pathologist present each time a demonstration is sprayed and have him show just how the spray is to be applied by actually applying the spray to a block of trees. This has universally resulted in demonstrating that the plant pathologist gets much better scab and frog-eye control than the grower. In fact, even this year, which is one of the worst if not the worst scab year on record, not a scab leaf or fruit has been found on any of the sprayed trees in many of the demonstrations. In all cases the demonstration trees sprayed by a plant pathologist have shown that the grower was not spraying as effectively as he should, since his control was never as good.

This year has clearly demonstrated to the growers that they are certain to get a higher percentage of scab infection unless they put on each and all of the sprays in the schedule at just the right time.

Now that the orchard work is nearly over, the next phases of the work are the conducting of demonstrations in disease-free seed and potato spraying, the following up of the disease-free raspberry tests (75,000 plants were distributed last year), and the rogueing and locating of sources of disease-free plants.

R. S. KIRBY.

EXTENSION LITERATURE.

During the December meeting of the American Phytopathological Society in Cincinnati, an informal conference of the majority of extension men present was held for the purpose of discussing policies to be followed in the development of our news sheet. It was suggested that it would be helpful if current State extension literature on pathological subjects could be listed in each issue. Those present volunteered to send in recent publications and to place the writer's name on the mailing list for all such material issued in the future. This will be filed in the office of THE EXTENSION PATHOLOGIST, and citations will be made in THE EXTENSION PATHOLOGIST of papers received. Since our last issue the following literature has reached this office.

Delaware:

Adams, J. F., Dusting cantaloupes for the control of some diseases and insects. Univ. of Delaware Ext. Circ. 16; 14 p. illus. April, 1924.

Florida:

Jefferies, J. E., New method of giving a tree a new root system. Univ. of Florida Press Bul. 359; 2 p. May 21, 1924.

Watson, J. R., The new citrus aphid. Univ. of Florida Press Bul. 358; 2 p. May 10, 1924.

Watson, J. R., Present status of the new citrus aphid. Press Bul. 360; 2 p. May 20, 1924.

Kansas:

Stokdyk, E. A., and Melchers, L. E., Potato-disease control in Kansas. Kansas Agr. Exp. St. Bul. 231; 45 p. illus. March, 1924.

Maryland:

Geise, F. W., and Boswell, V. R., More vegetables from the home garden. Univ. of Maryland Ext. Bul. No. 34; 74 p. illus. April, 1924.

Boswell, V. R., Changes in quality and chemical composition of parsnips under various storage conditions. Univ. of Maryland Agr. Exp. St. Bul. 258; 25 p. charts. October, 1923.

Norton, J. B. S., Ezekiel, W. N., and Jehle, R. A., Fruit-rotting sclerotinias. Univ. of Maryland Agr. Exp. Sta. Bul. 256; 32 p. illus. August, 1923.

Cory, E. N. and Potts, S. F., Control of truck-crop pests by dusting. Univ. of Maryland Agr. Exp. Sta. Bul. No. 261; 34 p. illus. February, 1924.

Mississippi:

Quarterly Bulletin of the State Plant Board. Vol. 3 No. 3, October, 1923. Vol. 3 No. 4, Jan., 1924. Vol. 4 No. 1, April, 1924.

Porto Rico:

Tucker, C. M., The coconut bud-rot in Porto Rico. Porto Rico Agr. Exp. Sta. Agr. Notes No. 2; 2 p. (Mimeo.) April, 1924.

Virginia:

Schneiderhan, F. J. and Fromme, F. D., Apple scab and its control in Virginia. Virginia Agr. Exp. Sta. Bul. 236; 29 p. illus. March, 1924.

Washington:

Zundel, G. L., Potato wilt diseases. State Col. of Washington Ext. Bul. 113; 6 p. March, 1924.

Zundel, G. L., Rose diseases. Western fruit, Vol. VI No. 5. p. 12, 20; illus. May, 1924.

Pertinent pointers on brown-rot of stone fruits. Better fruit, Vol. 18 No. 10., p. 7, 25, illus. April, 1924.

Sykes, H. and Zundel, G. L., Grain fire prevention. State Col. of Washington Ext. Bul. 115; 7 p. illus; April, 1924.

Contributions or suggestions with regard to subjects that might profitably be discussed in this news sheet should be addressed to:

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